

Meeting Summary:

Technology-Based Numerical Nutrient Limits in Discharge Permits: Technical Advisory Committee

May 4, 2004, 10 AM - 3 PM, DEQ Piedmont Regional Office

1. Members present:

Name	Representing
1. Alan Pollock	DEQ-OWQP, TAC Chairman
2. Denise Thompson (for Bob Steidel)	VA Municipal League
3. John B. Reeves, Sr.	Citizen
4. Melanie Davenport	Ches. Bay Commission
5. Chris Pomeroy, Aqualaw (alt. for Mark Haley, Hopewell RWTF)	VAMWA
6. Jeff Corbin	Chesapeake Bay Foundation
7. Tim Slaydon, Spotsylvania Co. Utils.	VA Association of Counties
8. Tom Botkins, MeadWestvaco	VA Manufacturers Assoc.
9. Dr. Clifford Randall	VA Tech Engineering
10. Robert Koroncai	EPA-Region 3
11. Katherine Slaughter	So. Environmental Law Center
State Resource Staff	
12. John Kennedy	DEQ-CBP, Staff Lead
13. Russ Baxter	Sect. of Natural Resources
14. Rick Hill	Dept. of Cons. & Rec.
15. Allan Brockenbrough (alt. for Jon Van Soestbergen)	DEQ-CO Water Permits
16. Tom Faha	DEQ-NRO Water Permits

Others present:

Tom Roberts (Smurfit-Stone) - VMA alternate
Bob Robinson - Omega Protein
Charles Martin - DEQ-OWQP/TMDL Program

- After introductions, Chairman Pollock reviewed the purpose and intent of this TAC, the procedures to be used to facilitate a balanced discussion of the issues among all representatives, and an opportunity at the end of each meeting for public input. A meeting schedule was laid out with a listing of issues to be discussed at each meeting. Future meeting dates are 6/15, 7/6, and 8/3, all at DEQ's Piedmont Regional Office, starting at 10 AM.
- A presentation was made to give background on the purposes of this rulemaking. The primary purpose is to amend the Point Source Policy for Nutrient Enriched Waters (9 VAC 25-40) regarding technology-based numerical nutrient limits for permits within the Bay watershed. The secondary purpose is to consider amending the Water Quality Management Planning Regulation (9 VAC 25-720) regarding load allocations resulting from

the combination of concentration limits and plant flows. The context of this rulemaking was described in relation to other activities underway, including development/adoption of Bay water quality standards, and revisions to tributary strategies for nutrient (and sediment) reduction.

4. TAC members were provided with copies of the comments received during the NOIRA review period, and a brief summary was given on the major topics and issues raised by the twenty-one respondents. The comments will be made available on the DEQ-CBP webpage set up for tracking this rulemaking: www.deq.state.va.us/bay/multi.html
5. Additional background information was provided in several handouts and discussed, including:
 - Lists of the "significant" point source nutrient dischargers by Bay tributary currently tracked for their annual discharged nitrogen and phosphorus concentrations and loads.
 - The point source nitrogen and phosphorus control levels proposed in the draft tributary strategies now under public review.
 - A spreadsheet of the annual, delivered nutrient loads by Bay basin and major source category (agriculture, urban runoff, mixed open land, point source, septic, forest, and air deposition direct to non-tidal water), for 1985, 2002, and under the draft tributary strategies in the year 2010.
6. Several comments and questions were then discussed among the TAC, including:
 - Need for better understanding of CBP Watershed Model enhancements (Phase 5), particularly groundwater simulation and nutrient contribution.
 - Clarification that the charge to the TAC is to advise on development of a technology-based regulation, rather than water quality based limits.
 - Recognition that other activities (in addition to water quality standards and tributary strategies) have a bearing on the nutrient reduction effort -- notably development of freshwater nutrient criteria that will eventually be adopted as standards for the non-tidal portion of the Bay watershed. The TAC was informed that information about this activity can be found at the DEQ webpage address: www.deq.state.va.us/wqs/rule.html#NUT2
 - Not only are numerous activities underway related to nutrients, many are overlapping. The Chesapeake Bay Program efforts have built a good basis over the years to justify these activities, with knowledge gained about the varying environmental responses in different tidal areas. As such, a "one-size-fits-all" approach may not be the best solution.
7. **Issue #1** on the agenda was then taken up: Permit Averaging Period for Compliance. Prior to this meeting, TAC members received a copy of a 3/3/04 memo from EPA Office of Wastewater Management (OWM) on the subject of annual nutrient permit limits. EPA Region 3 and their Chesapeake Bay Program Office had asked for this guidance in response to the question

of whether or not shorter-term limits were necessary to meet Bay water quality objectives, given load allocations expressed as annual totals. The EPA-OWM memo concurred that nitrogen and phosphorus permit limits, expressed as an annual limit, are appropriate. EPA-OWM agreed it was impracticable to express these limitations as a daily maximum, weekly average, or monthly average for the protection of the Bay and its tidal tributaries from excess nutrient loading.

The TAC discussed this memo, with general agreement that nutrient limits and their implementation need to mirror the science and assumptions that formed the proposed water quality criteria, as well as the modeling framework that simulated environmental responses. An opinion was expressed about the need to cap effluent levels in the summer (critical time for living resources and low-D.O. stress) and not relax treatment, even though the objective is meeting an annual load cap or average concentration. A question was raised about how "total-nitrogen" would be defined, given the fact that what remains after limit-of-technology (LOT) treatment is mostly organic, refractory-N, and may not be considered bio-available in the environment.

Other issues discussed were:

- Whether anti-degradation would prohibit a plant, operating at LOT, from ever expanding (the key is loading, not just the effluent concentration).
- Seasonality of limits and averaging periods must consider timing of plant flows. Resort communities may see majority of flow in summer, while some industries only have seasonal production.
- It would be helpful to see a draft permit and Discharge Monitoring Report based on this annual compliance concept (i.e., how are limits expressed).

8. **Issue #2** was then discussed: Concentration Limits and Annual Loads (*Need for two regulations; how do these fit together?*). Background was given on the secondary action of this rulemaking -- possibly amend the Water Quality Management (WQM) Regulation [9 VAC 25-720]. When WQM Plans were deregulated, the Wasteload Allocations and Water Quality Effluent Limits they contained needed to be preserved under a regulatory framework. The WQM Regulation is organized by the nine major river basins in VA, and consists of two parts:

- Part A: TMDL wasteload allocations within a given basin
- Part B: wasteload allocations and water quality based effluent limits taken from the deregulated WQM Plans.

It was suggested that a "Part C" could be added to the WQM Regulation, to contain the point source nutrient load allocations (taken from the final, approved Tributary Strategies) for the five river basins that are within the Chesapeake Bay watershed. These could be expressed as basin aggregates and/or individual loads.

The TAC then discussed this option, with an opinion expressed about the preference for an enforceable policy regarding the annual loads. However, with the uncertainty of how watershed based permitting and/or nutrient trading might develop and operate to improve cost-effectiveness, this WQM Regulation change may not be the most flexible approach to take. Others want to foster trading to accommodate future population growth, and apply cost-effective solutions where funds are lacking and growth is expected. There may be another option -- legislative action may be needed to revise the Discharge Permit Regulation (9 VAC 25-31) to authorize watershed permits. It is estimated that trading has the potential to save Virginia \$250 million in implementing the tributary strategies.

It was also suggested that the WQM Regulation could be used to express the effluent quality desired, placing loads in one section and technology-based concentrations in another. This might be a more efficient approach, rather than amending the Point Source Policy as originally envisioned -- house all the Bay point source, nutrient-related requirements in one regulation, instead of two.

It was noted that the discussion thus far had centered on form rather than substance, and there is a need to further discuss the content of the regulation. That might better inform the TAC on possible recommendations to make, and could suggest the best approach toward implementation.

9. **Issue #3: Size of Facilities Affected by Rulemaking.** As with Issue #2, several members felt that the decision on plant size affected by the regulation should match the science and assumptions used to form the proposed water quality criteria, and the modeling framework for load input. It was requested that for the next meeting, members have information on:
- Number of municipal plants, by basin, not currently 'captured' by the definition of "significant nutrient discharger".
 - Percentage of flow not treated for nutrient removal and load generated by these "non-significants".
 - If available, cost estimates to retrofit these plants.

Several members would like to see a role for these smaller plants in the nutrient reduction effort, and an accounting of their discharge loads now and into the future, since the Bay Program commitment is to "cap" loads in the face of population growth. The existing Policy provision to regulate new (or expanded) plant flows of 50,000 gpd or greater should somehow be retained, but there is doubt about how low the cut-off should be for plants that aren't expanding. A suggestion was made to sequence categories of plant sizes by range, to achieve technology-based limits in a phased approach -- largest plants first, medium next, and smallest later. Permit writers have used a 40,000 gpd cut-off for a variety of requirements (e.g., effluent monitoring),

and this might be the lowest threshold to consider. If the Policy is applied to very small plants, then cost-share should be made available for installing nutrient reduction systems, because of concerns about the low cost-effectiveness of these retrofits. The flow cut-off must recognize and avoid an unintended "incentive" for the proliferation of small package plants sized just below the threshold. It was noted that several "small" plant owners are dealing with more stringent treatment requirements by privatizing the operation of their facility, using contractors familiar with the installation and functioning of technologically advanced treatment systems. It was also suggested that small plant owners could make an equitable contribution to the nutrient reduction effort by paying into a mitigation fund, like that used in the wetlands program.

10. **Issue #4: Geographic Scope of Rulemaking.** Several options were given to the TAC for their consideration, ranging from the entire Chesapeake Bay watershed to just certain sections. An opinion was expressed that the scope should focus on waters designated as "impaired", to deal with concerns about potential water quality improvements and relative impact of loads from various locations (e.g., James basin). Most of the TAC appeared to support the scope of this rulemaking being: "Facilities discharging into the Chesapeake Bay Watershed".

11. **Public Comments:** no public comments were offered.

The TAC then adjourned, with the next meeting scheduled for June 15, 2004.